PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of	Docket No: Q65726
Yasuharu YOSHIDA	
Appln. No.: 09/921,714	Group Art Unit: 2617
Confirmation No.: 8770	Examiner: Matthew W. GENACK
Filed: August 6, 2001	

For: ON-VEHICLE RADIO COMMUNICATION EQUIPMENT, A DEDICATED SHORT RANGE COMMUNICATION SYSTEM, AND ON-VEHICLE RADIO COMMUNICATION METHOD

REPLY BRIEF PURSUANT TO 37 C.F.R. § 41.41

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.41, Appellant respectfully submits this Reply Brief in response to the Examiner's Answer dated July 27, 2007. Entry of this Reply Brief is respectfully requested.

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STATUS OF CLAIMS

Claims 1-13 are pending, have been rejected, and are the subject of this appeal.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Ground 1

Claims 1, 3, 5, 6, and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,275,552 to Ando (hereinafter "Ando") in view of U.S. Patent No. 5,806,002 to Wiatrowski (hereinafter "Wiatrowski").

Ground 2

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ando in view of Wiatrowski.

Ground 3

Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ando in view of Wiatrowski.

Ground 4

Claims 8, 10, 12 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ando in view of Wiatrowski.

Ground 5

Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ando in view of Wiatrowski.

Ground 6

Claim 11 stands under 35 U.S.C. § 103(a) as being unpatentable over Ando in view of Wiatrowski.

ARGUMENT

In addition to the arguments set forth in the Appeal Brief as filed on January 30, 2007, Appellants respond to certain points made in the Examiner's Answer as follows:

(A)(i) At pages 7-8, the Examiner asserts that Appellant "ignores the possibility of scenarios wherein there exist a plurality of classes or drivers using the tollgate system, each class of drivers having different needs", and accordingly the frequency switching capabilities of Wiatrowski do not introduce needless complexity into the system of Ando.

Appellant notes that these additional scenarios discussed by the Examiner are not found in either Ando or Wiatrowski. As Appellant discussed at pages 14-15 of the Appeal Brief, the Ando system uses a time-division multiple access method to handle multiple vehicles and increased communications traffic. Accordingly, Appellant respectfully submits that to the extent Ando would be concerned with the Examiner's postulated scenarios, Ando would foremost seek a solution within the time-division multiple access method, rather than to add the complexity of additional components necessarily associated with a switched-frequency environment suggested by Wiatrowski.

(ii) The Examiner maintains that "Appellant fails to cite the stated goal of [col. 2, lines 56-57] of Ando" and attempts to characterize Ando at this passage as limited to simplifying comparator circuitry for processing synchronization signals of different data lengths (see page 8, lines 8-10 of Examiner's Answer). However, the Examiner seems to ignore the explicit statement of Ando that "[t]he circuit must be more simplified and reduced in size for mounting." Appellant respectfully submits that the reference to "the circuit" refers not only to the comparators, but also to the semiconductor integrated circuit as a whole and thus to the circuit as a whole, because presumably any additional circuit components, comparators or otherwise, would increase the complexity and size of the circuit and thus prevent it from being mountable as required by Ando.

Moreover, while the back-end registers and comparators may not need to be modified, the Examiner maintains that adding frequency switched capabilities only involves "modifying

the oscillators" Appellant respectfully submits that the Examiner downplays here the extent and amount of circuit modifications necessary in order to modify the Ando system by a switched frequency design as suggested by Wiatrowski. Adding frequency switching capabilities to the system of Ando would entail adding components such as a more stable oscillator, associated phase locked loop (PLL) circuitry including frequency dividers for the oscillator and feedback signals, filter components and shielding to filter these signals to address the increased noise introduced by a PLL into the system. Since Ando seeks to simplify and reduce circuit size in order to make the circuit mountable, Appellant respectfully submits that adding such components would militate against making the suggested combination.

(iii) The Examiner maintains that Appellant's assertion is "incorrect because Ando does disclose the use of multiple downlink frequencies" and asserts that Appellant admitted this at page 17 of the Appeal Brief. However, the Examiner has mischaracterized Appellant's statement at page 17. Appellant stated that Ando uses "transmission channels, each of which uses a different frequency for the down-link and for the up-link." This disclosure of Ando merely indicates that the down-link and up-link cannot be on the same channel. At Appellant clearly indicates at page 14-15, Ando uses time-division multiple access in order to pack information into a channel. In order to achieve duplex communication between the toll both and the passing car, Ando uses a different downlink channel from the uplink channel. However, this does not change the fact that the frequency of the downlink and uplink are generated by a fixed crystal oscillator, and hence are not switched.

(iv) The Examiner asserts that "Appellant ignores the principle that engineering solutions often involve trade-offs." However, Appellant respectfully submits that this is precisely Appellant's point in arguing that Ando and Wiatrowski are impermissibly combined. Upon viewing the disclosures of Ando and Wiatrowski in their entirety, one having ordinary skill in the art would reject the combination because such a combination would add additional complexity to the system of Ando and would require additional components in the system of Ando thus frustrating a stated goal of Ando of increasing simplicity and reducing size of

circuitry. Moreover, as Appellant argued at page 17 of the Appeal Brief, adding frequency switching would require additional time for the modified system of Ando to lock onto the correct frequency, and thus frustrate the time-division multiple access solution that Ando proposes.

(B) The Examiner maintains that a reference teaches away when it specifically states that a certain combination is undesirable. While this statement is correct, Appellant submits that teaching away is a factual issue where the prior art references must be viewed as a whole. *See Medichem v. Rolabo*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (where the prior art contains "apparently conflicting" teachings (i.e., where some references teach the combination and others teach away from it) each reference must be considered for its power to suggest solutions to an artisan of ordinary skill, considering the degree to which one reference might accurately discredit another). Thus, a reference may also teach away from combination with another reference by virtue of its teachings taken as a whole. *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994) (when a piece of prior art "suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant" the piece of prior art is said to "teach away" from the claimed invention). Accordingly, as Appellant has argued above and in the Appeal Brief, the teachings of Ando, when viewed as a whole, teach away from combination with the frequency switching concept of Wiatrowski. For these reasons, Appellant respectfully submits that the Examiner's proposed rationale for making such a combination is flawed and one of ordinary skill in the art would not have been so inclined, based on the whole of the teachings, to make the combination to produce Appellant's claimed invention.

(C) In response to Appellant's argument at pages 24-25 of the Appeal Brief, the Examiner maintains that the priority channels of Wiatrowski correspond to the claimed first type of communication and the non-priority channels of Wiatrowski correspond to the claimed second type of communication and that the different channels may be assigned different squelch rules. However, Appellant respectfully submits that even assuming this reading of Wiatrowski against claim 2 is correct, Wiatrowski still does not teach all of the features of claim 2.

Claim 2 sets forth the feature that the first type of communication requires a high speed link establishment and the second-type of communication does not require a high speed link establishment. At col. 9, lines 31-45, Wiatrowski teaches that the squelch rules may include carrier squelch, private line, digital private line, data-OR-squelch, and data-AND-squelch. Digital private line requires *detection* of a low speed binary signal, and data-OR-squelch requires *detection* of a valid sub-band signal. Thus, Appellant respectfully submits that the squelch rules are inapposite of the claimed high speed link establishment and non high-speed link establishment. That is, the squelch rules do not require *establishment* of a high-speed or non-high speed link, but only detection of a low speed or high speed signal.

(D) At page 11 of the Examiner's Answer, the Examiner maintains that Fig. 9 of Wiatrowski teaches the feature of claim 4 wherein a switching means switches demodulation method when switching radio frequencies. Appellant notes that each channel in Fig. 9 has the same transmit and receive frequency. As discussed at col. 8, lines 65-67, "a communication unit may have only two frequencies but may have 16 or more channels assigned, as shown in [the table in col. 9]." In other words, Wiatrowski uses different demodulation types and squelch rules to distinguish the channels *in the case where the channels use the same frequency*. Thus, Appellant asserts that Wiatrowski does not teach the feature of claim 4 of switching demodulation methods when switching radio frequencies. Appellant further submits that the mere fact that Wiatrowski states that the table is "not an exhaustive list of all possible channel configurations", as stated by the Examiner, does not equate to Wiatrowski teaching the claimed feature.

CONCLUSION

For the above reasons as well as the reasons set forth in Appeal Brief, Appellant respectfully requests that the Board reverse the Examiner's rejections of all claims on Appeal. An early and favorable decision on the merits of this Appeal is respectfully requested.

Respectfully submitted,

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